BIOLOGICAL EVALUATION

COOPERATIVE GYPSY MOTH PROJECT
FOR
NORTHERN INDIANA
2007

Gypsy moth is moving into northeastern Indiana from the infestations in Michigan and Ohio. Its movement is by natural spread and short distance transport by human activities. To detect the introduction of this pest, the State of Indiana has surveyed since 1972. From 1988 to 1998 the survey used a one-mile grid in the northern third of Indiana and a two-mile grid in the remainder of the state. In 1999, Indiana adopted the Slow-The-Spread (STS) survey protocol developed by the USDA Forest Service. Traps are set in detection (2K or 3K) and delimit (250M, 500M or 1K) grids across the state. The 2006 survey set 13,114 detection traps and 3,508 delimit traps.

The STS analysis of the 2006 trapping data identified potential problem areas in 4 counties in northern Indiana and 1 county in central Indiana (Map 1). The analysis identified higher or equivalent moth catches in delimiting survey grids placed at each site compared to detections and delimits in prior years. The STS analysis indicates that gypsy moth populations are stable or increasing in the potential problem areas and recommends action.

In the 4 counties with proposed treatment sites, the mean number of gypsy moths caught in detection traps has fluctuated from 2002 to 2006 (Table 1 & Figure 1). The movement of gypsy moth in the state from 2002 to 2006 has advanced and receded based on the 10-month line (Map 4).

Map 2 and 3 show the number of gypsy moth detected in each county for 2006 and 2005, respectively. For Delaware County, an eradication project is proposed for 2007. Information regarding this project is available in the "Environmental Assessment and Biological Evaluation, Cooperative Gypsy Moth Project for Central Indiana 2007".

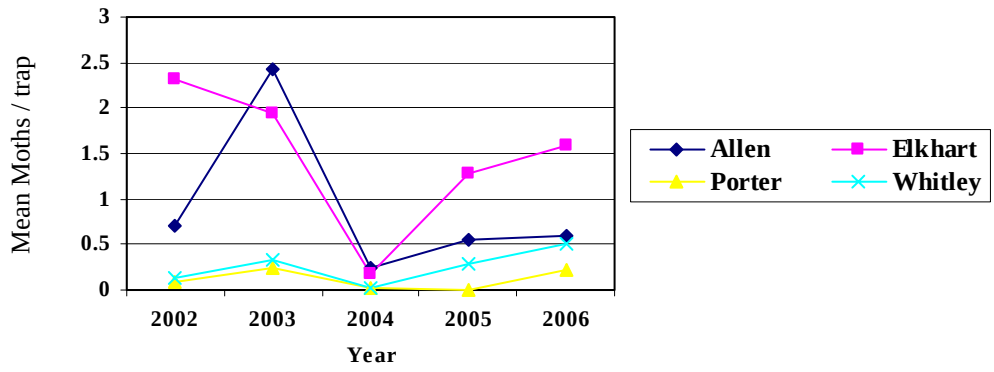
Map 1 shows various moth lines across northern Indiana based on STS analysis of 2006 data. This analysis places the STS action area below the 10-moth line. The 15 proposed treatment sites in 4 counties are based on the trapping surveys, STS analysis, egg mass detections and habitat.

The site and moth trapping data can be viewed at the STS website - http://da.ento.vt.edu/Region2/t2007/IN_053-01.html

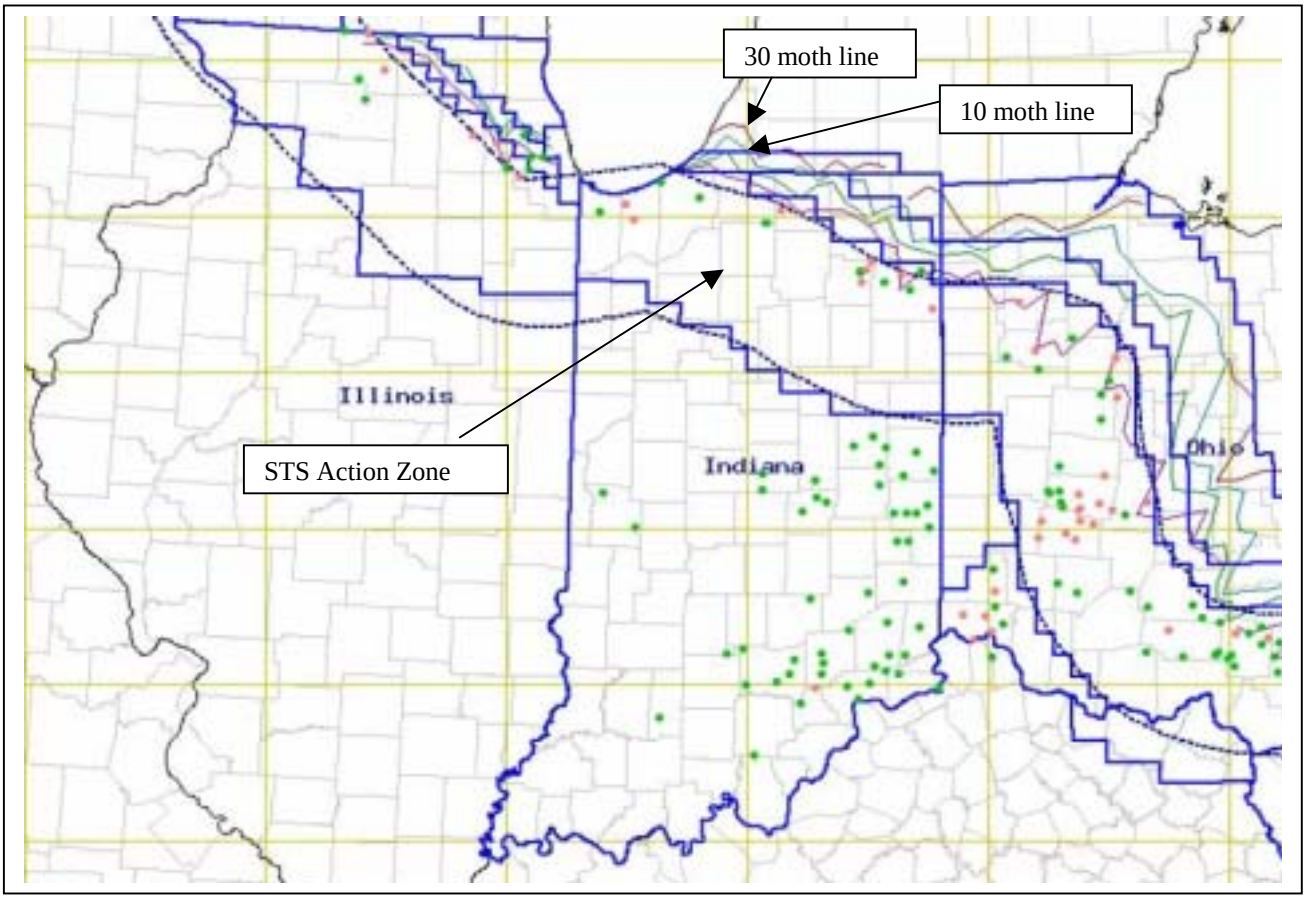
Table 1. Mean number of moths per detection trap (milk carton and delta) in the proposed counties for 2002 to 2006.

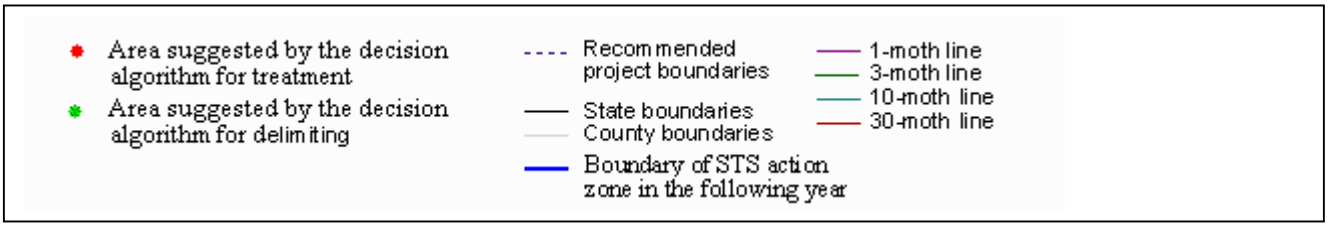
County	2002	2003	2004	2005	2006
Allen	0.71	2.43	0.24	0.55	0.6
Elkhart	2.32	1.95	0.17	1.29	1.59
Porter	0.09	0.24	0.03	0.01	0.23
Whitley	0.14	0.32	0.03	0.28	0.51

Figure 1: Mean number of moths per detection trap from 2002 to 2006 for four northern counties

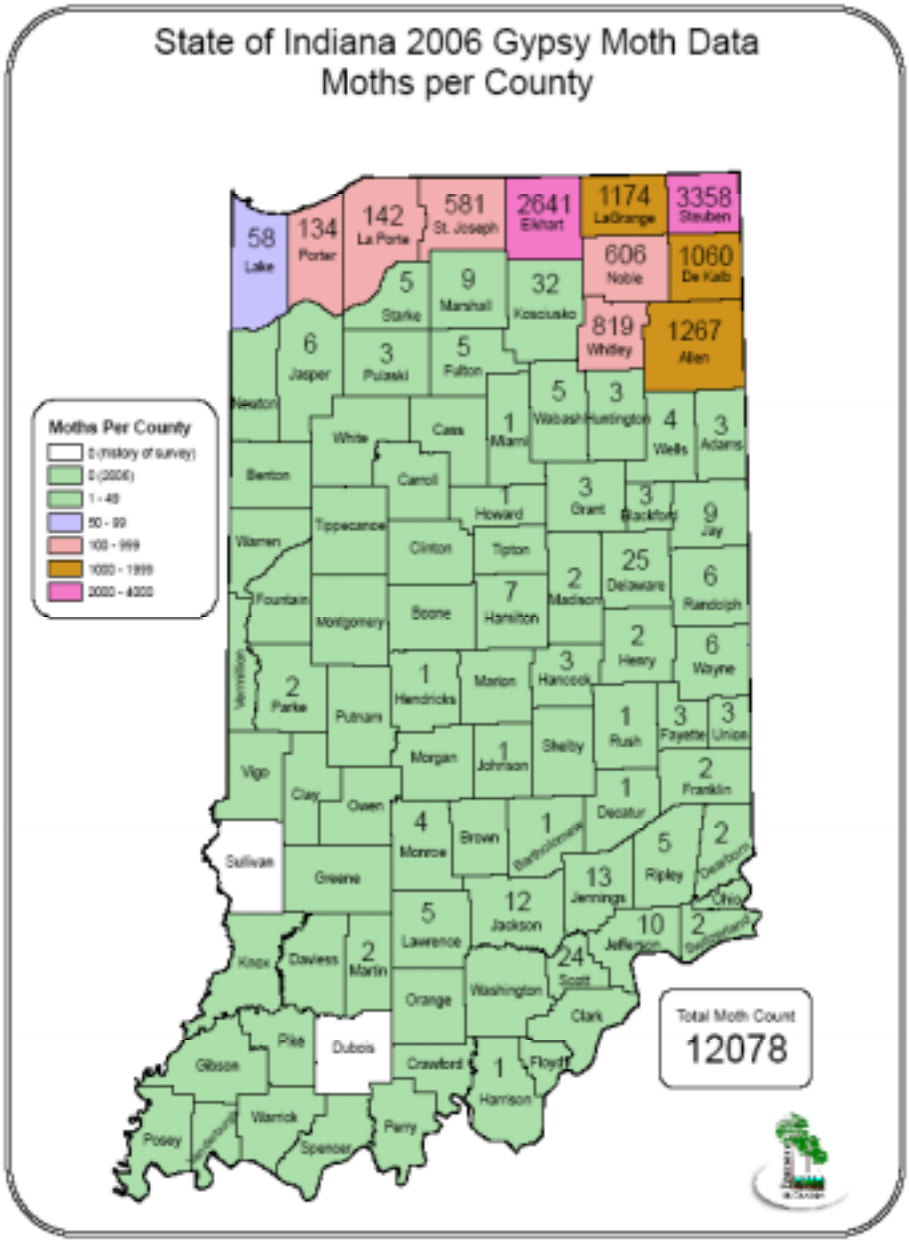


Map 1. Results of the 2006 Gypsy Moth survey showing potential problem areas by Slow-The-Spread analysis for Illinois, Indiana and Ohio (red dots indicate suggested treatments and green dots indicate suggested delimit survey).

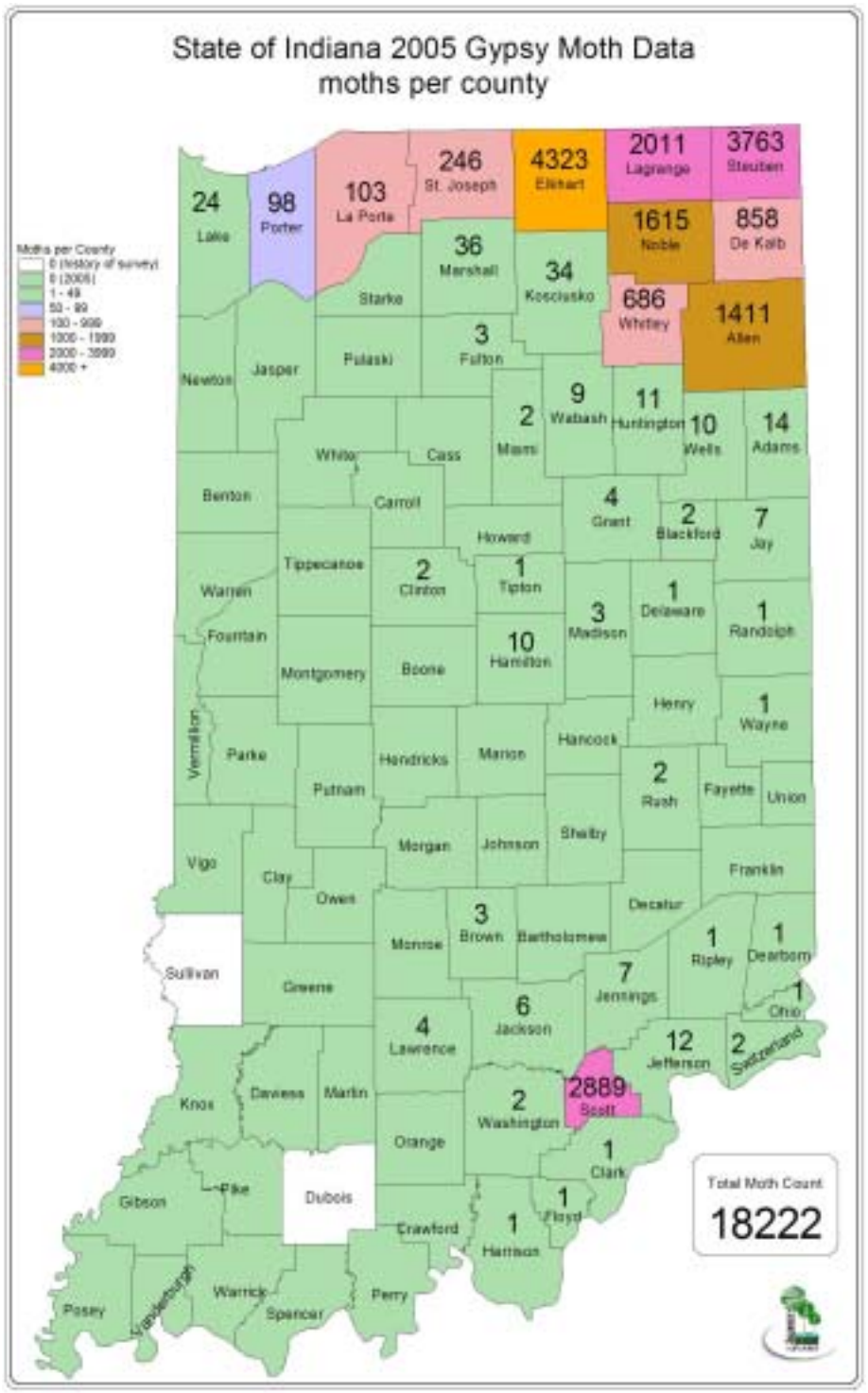




Map 2. Male moth catches by county for 2006.



Map 3. Male moth catches by county for 2005.



Map 4. The 10-moth line of Gypsy Moth in Indiana from 2002 to 2006.